Bird's-eye view of the same site with the work partly completed. Thirty-two per cent of the earth has been filled in for the Germantown dam.

...mud. The World War was in progress as this great engineering feat was launched and governmental regulations threatened for a time to halt completely all labor in connection with the undertaking.

Legal battles without number had to be fought in every court of the state and in the supreme court of the country. This all took time and patience. But in the end every obstacle was overcome and great drag lines suddenly appeared on the Miami River, and machines of every conceivable nature bobbed up throughout the district. Digging had begun, and with it a fair start to the vast engineering job.

The retarding basins, to be constructed at five different points in the district, will be formed by dams built across the valleys of the Miami, Mad and Stillwater rivers and on Twin and Loramie creeks. Each dam will have permanent openings through its base through which the ordinary flow of the river and the flow during ordinary freshets will pass unimpeded. When flood waters of greater volume make their appearance and are unable to pass through the outlet conduits, this excess water will be checked and held back temporarily in the earthen reservoirs.

Engineer Morgan's plans call for a total capacity for the retarding basins to the spillway level of 840,000 acre feet, or sixty per cent of the total rainfall during the disastrous 1913 flood.

The five dry reservoirs or retarding basins will cost in the neighborhood of $6,735,108.

Besides these, the Conservancy plan provides for local flood protection in such cities as Piqua, Troy, Dayton, West Carrollton, Miamisburg, Franklin, Middletown and Hamilton, to cost about $3,467,876.

REAL ESTATE purchased by the district in order to provide suitable channels for the river and other necessary improvement will require not less than 30,000 acres. The entire village of Osborn, a community of 700 people, with modern churches, schoolhouses, banks, business houses, etc., has been purchased by the Miami Conservancy District at an expense of one million dollars. This is the first instance on record of an entire town being purchased for welfare purposes. Railroads and traction lines passing in or near Osborn have had to change their routes at an expense of one million dollars.

The dry reservoir plan aims to reduce and control the flow of the Miami River, which is the principal stream passing through the sixty miles of district incorporated in the general scheme. These basins will hold back all the flood water that cannot safely pass through the ordinary river channel. Community life, in this way, will be safeguarded and property interests properly protected against recurrent serious ravages of a swollen stream.

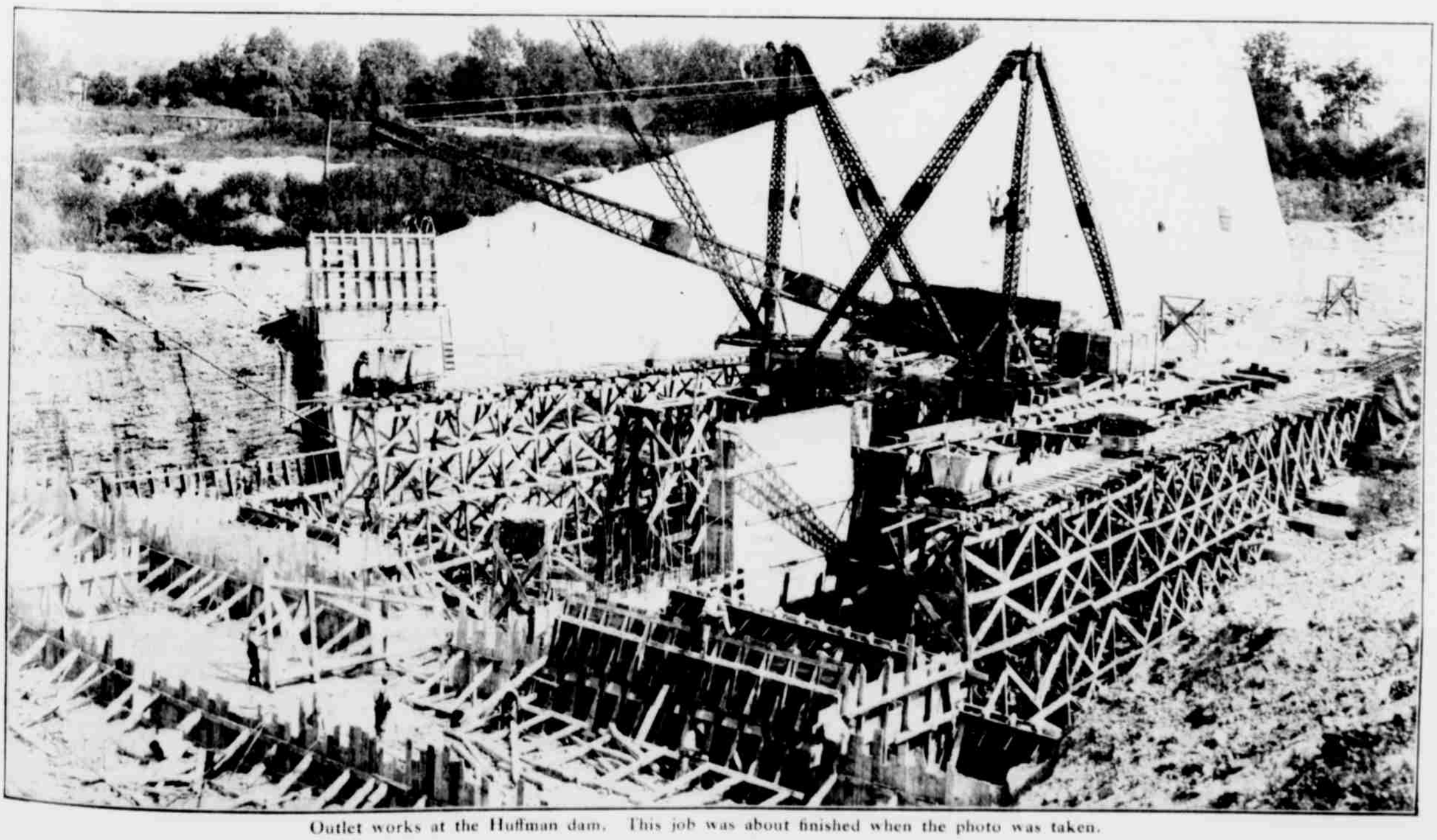
These dams will be constructed of carefully selected earth, placed and compacted so as to form practically impervious structures. There may be times when miles upon miles of fertile farm land will be overrun with flood waters, but such land already has come under control of the Conservancy district, so that the risk always is with the district and not with private ownership.

In the preparation of this great enterprise the engineering brains of the country were employed. Prof. Daniel W. Mead, of Madison, Wis., is a consulting engineer of the district. Charles H. Paul, who constructed the Arrow Rock Dam in the West, is associate chief engineer.

Welfare work among employes of the district has not been overlooked. At each of the dry reservoir sites Germantown, Englewood, Lockington, Taylorsville and Huffman, community centers have been erected. Schoolhouses have been built to enable the children of workmen to continue their education under the direction of experienced teachers. Community grocery stores have been established, providing one method of combating the high cost of living. Churches have been constructed alongside each community in order that the religious element in people's lives may not be eliminated.

One of the pressing problems which confronted the directors of the district was to secure the services of a first class engineer who in reality should become the superintendent for the whole job. Charles H. Locher, a Virginian by birth, with a record for successful endeavor in many parts of the country, finally was selected for this task.

More depends upon how this work is done than has depended upon thousands of other engineering tasks of equal size in years gone by. More cement will be used in the construction work in the Miami Valley than was used in building the Panama Canal.



Outlet works at the Huffman dam. This job was about finished when the photo was taken.